

What is claimed is:

- [c1]** 1. A system for organizing data for use by an application, comprising:
- a set top box, including,
 - a physical memory,
 - a mass storage device, and
 - a processor operatively connected to said physical memory and said mass storage device for implementing said application,
- wherein said physical memory and said mass storage device are configured to store said data, and
- wherein said processor controls storage and manipulation of said data between said physical memory and said mass storage device so that a substantial portion of the data to be used by said application is available for immediate access from said physical memory.
- [c2]** 2. The system of claim 1, wherein said processor directs at least one process to add data from the mass storage device to said physical memory so as to maintain a sufficient amount of data to be accessed for the application.
- [c3]** 3. The system of claim 2, wherein said processor directs another process to remove data from said mass storage device and said physical memory so as to ensure that the data used by said application can be accessed from said physical memory without delay.
- [c4]** 4. The system of claim 3, wherein said processes are run at a low priority so as not to interfere with the implementation of said application.
- [c5]** 5. The system of claim 1, wherein the processor directs that the data be temporally sorted into data that is most likely to be immediately accessed for an application, and data that is most likely to be accessed in the more distant future, said data that is most likely to be

immediately accessed being stored in said physical memory, said data that is most likely to be accessed in the more distant future being stored in said mass storage device.

[c6] 6. The system of claim 5, wherein said physical memory is subject to accesses by the processor to the data contained therein to run said application without having to access the mass storage device.

[c7] 7. The system of claim 1, wherein the processor controls storage and manipulation of said data so that the size of the physical memory is configured based on a temporal window in said physical memory that encompasses most common usage scenarios employing the data.

[c8] 8. The system of claim 1, wherein the processor controls storage and manipulation of said data so that necessary or relevant parts of said data may be accessed as the processor detects usage scenarios likely to result in a cache miss, or when cache miss is not predicted the system.

[c9] 9. The system of claim 1, wherein said data comprises program guide data for said application comprising a program guide for a plurality of program sources.

[c10] 10. The system of claim 1, wherein said physical memory comprises a random access memory (RAM).

[c11] 11. The system of claim 1, wherein said mass storage device comprises a hard disk.

[c12] 12. The system of claim 9, further comprising a communications channel configured to transmit said program guide data to said set top box.

[c13] 13. The system of claim 12, wherein said communications channel is configured as one of a satellite communications channel, a

cable communications channel, a digital video broadcasting (DVB) communications channel and a terrestrial broadcast communications channel.

[c14] 14. The system of claim 9, wherein said program guide is configured to display said program guide data on a display device coupled to said set top box in a tabular form including program times, program channels and program identifications.

[c15] 15. The system of claim 14, wherein said program identifications include information regarding at least one of actors, ratings, description of programs, cost for pay per view, a frequency of said communications channel, a video channel within said frequency, and an audio channel within said frequency.

[c16] 16. A method for organizing data for use by an application, comprising:

providing a set top box, including a physical memory and a mass storage device which are operatively coupled to a processor therein for implementing said application,

configuring said physical memory and said mass storage device to store said data, and

controlling storage and manipulation of said data between said physical memory and said mass storage device so that the data to be used by said application is available for immediate access from said physical memory.

[c17] 17. The method of claim 16, wherein said processor directs at least one low-priority background process to add data from the mass storage device to said physical memory so as to maintain a sufficient amount of data to be accessed for the application.

[c18] 18. The system of claim 17, wherein said processor directs another low-priority background process to remove data from said mass

storage device and said physical memory so as to ensure that the data used by said application can be accessed from said physical memory without delay.

[c19] 19. The method of claim 18, wherein said low-priority background processes are run so as not to interfere with the implementation with said application.

[c20] 20. The method of claim 16, wherein the processor directs that the data be temporally sorted into data that is most likely to be immediately accessed for an application, and data that is most likely to be accessed in the more distant future, said data that is most likely to be immediately accessed being stored in said physical memory, said data that is most likely to be accessed in the more distant future being stored in said mass storage device.

[c21] 21. The method of claim 20, wherein said physical memory is subject to accesses by the processor to the data contained therein to run said application without having to access the mass storage device.

[c22] 22. The method of claim 16, wherein the processor controls storage and manipulation of said data so that the size of the physical memory is configured based on a temporal window in said physical memory that encompasses most common usage scenarios employing the data.

[c23] 23. The method of claim 16, wherein the processor controls storage and manipulation of said data so that necessary or relevant portions of said data may be accessed as the processor detects usage scenarios likely to result in a cache miss, or when cache miss is not predicted.

[c24] 24. The method of claim 16, wherein said data comprises program guide data for said application comprising a program guide for a plurality of program sources.

[c25] 25. The method of claim 16, wherein said physical memory comprises a random access memory (RAM).

[c26] 26. The method of claim 16, wherein said bulk storage device comprises a hard disk.

[c27] 27. The method of claim 24, further comprising a communications channel configured to transmit said program guide data to said set top box.

[c28] 28. The method of claim 27, wherein said communications channel is configured as one of a satellite communications channel, a cable communications channel, a digital video broadcasting (DVB) communications channel and a terrestrial broadcast communications channel.

[c29] 29. The method of claim 24, wherein said program guide is configured to display said program guide data on a device coupled to said set top box in a tabular form including program times, program channels and program identifications.

[c30] 30. The method of claim 29, wherein said program identifications include information regarding at least one of actors, ratings, description of programs, cost for pay per view, a frequency of said communications channel, a video channel within said frequency, and an audio channel within said frequency.

[c31] 31. A computer-readable medium carrying one or more sequences of one or more instructions for organizing data for use by an application, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps recited in any one of claims 16-30.

[c32] 32. A system for efficient storage of data for use by an application, comprising:

- a set top box, including,
- a physical memory,
- a mass storage device, and
- a processor directing at least two low-priority background process, one to add data from the mass storage device to said physical memory, the other to remove data from said mass storage device and said physical memory, so as to ensure that the data used by said application can be accessed from said physical memory without delay.